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Ad 47A

MARCH 1, 1945

Reserve

UNITED STATES DEPARTMENT OF AGRICULTURE
WAR FOOD ADMINISTRATION
✓ AGRICULTURAL ADJUSTMENT AGENCY

TEXAS

1945 AGRICULTURAL CONSERVATION PROGRAM
PRACTICE ALLOWANCE FORMULA
&
SPECIFICATIONS OF PRACTICES

45:111

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1945 TEXAS CONSERVATION PRACTICES

Conservation practice allowance. The conservation practice allowance is the maximum amount of payment that may be made for carrying out conservation practices on the farm. The allowance for any farm shall be the larger of \$20 or the sum of the following:

1. 60 cents per acre of cropland on the farm.
2. \$1.50 per acre of commercial orchards on the farm in 1944.
3. \$1.00 per acre of commercial vegetables normally grown on the farm. The 1944 acreage of commercial vegetables on the farm or, if no commercial vegetables were planted on the farm in 1944, the 1943 acreage of commercial vegetables on the farm shall be considered the normal acreage of commercial vegetables on the farm.
4. 6 cents per acre of noncrop pasture or range land on the farm in 1944.

APR 19 1945

1. CONSTRUCTION OF STANDARD AND SPREADER TERRACES FOR WHICH PROPER OUTLETS ARE PROVIDED.

(Prior approval of the county committee must be obtained.)

(a) Large ridge-type terraces - \$1.50 per 100 linear feet.

(b) Small ridge-type and channel-type terraces - \$1.00 per 100 linear feet.

SPECIFICATIONS: The grade for the terrace channel may be variable, but must not exceed 3 inches per 100 feet (level terraces preferred where adaptable, particularly on land having very little slope in low rainfall areas).

Fills in terraces must be built to sufficient height across gullies so that they will be above normal level of terrace ridge after settling.

The maximum spacing of terraces shall be according to the vertical interval formula $s \sqrt{3}$ with a tolerance of 6 inches

increase in the vertical interval.

The values of "s" in the spacing formula are determined as follows:

Where a terrace line will cross no slope greater than 2 percent, the value of "s" may be taken as the steepest slope along the terrace location.

Where a terrace line will cross any slope greater than 2 percent, the value of "s" shall be one-half the sum of the greatest slope and the least slope, but where the least slope is less than 2 percent it may be considered as 2 percent.

The outlet ends of all terraces must be protected against erosion. Terrace systems should be so planned that the terrace may have individual outlets upon well-protected pastures, meadows, or wooded areas. If conditions are unfavorable for this method, a meadow or pasture strip may be developed or sodded channel established. Masonry structures may be used where such vegetation is impracticable. All terraces must have a channel capacity of at least 10 square feet. Openings at the end of a graded terrace must have a minimum cross-sectional area equal to or greater than that of the terrace channel.

The terrace should be full bodied to the extent that the slopes of the terrace fill from the inside cut lines above and below

the terrace ridge to the high point of the terrace ridge should be straight or convex and not concave.

All elevation readings taken to determine the ridge height or cross section shall be taken in a man's footprint that has had his weight in it.

Large ridge-type terraces. The height and cross-section specifications set forth in the table below must be met:

Average slope of land in feet per 100 feet	Minimum height - top of terrace above normal ground line	Cross section above normal ground line in square feet	New terraces	Settled terraces
	Inches	Inches	Square feet	Square feet
1/2 or less	12	10	9.6	8.0
1	13	11	9.6	8.0
2	14-1/2	12	9.6	8.0
3	14-1/2	12	9.6	8.0
4	15	12-1/2	9.6	8.0
5	15	12-1/2	9.6	8.0
6	15-1/2	13	9.6	8.0
7	16	13-1/2	9.6	8.0
8 or more	16-1/2	14	9.6	8.0

Small ridge-type terraces. The height and cross-section specifications set forth in the table below must be met:

Average slope of land in feet per 100 feet	Minimum height - top of terrace above normal ground line	Cross section above normal ground line in square feet	New terraces	Settled terraces
	Inches	Inches	Square feet	Square feet
1/2 or less	12	10	6.0	5.0
1	13	11	6.0	5.0
2	14-1/2	12	6.0	5.0
3	14-1/2	12	6.0	5.0
4	15	12-1/2	6.0	5.0
5	15	12-1/2	6.0	5.0
6	15-1/2	13	6.0	5.0
7	16	13-1/2	6.0	5.0
8 or more	16-1/2	14	6.0	5.0

Channel-type terraces. Channel-type terraces are built by moving dirt downhill to form a ridge. Channel-type terraces will be accepted for payment if the cross-sectional area of the channel is a minimum of 10 square feet plus 1 square foot for each 100 feet over 1,000 feet in length of the terrace draining in one direction. Measurements for channel capacity will be made at the lowest points in the terrace ridge and from a point 2 feet from the top of the ridge. It is desirable that the bottom of the water channel be at least 4 feet wide and approximately flat. The specifications for a channel-type terrace with respect to spacing, grade, fills, and outlets are the same as those shown for a ridge-type terrace.

2. CONSTRUCTION OF DIVERSION TERRACES - 8 cents per cubic yard, but not to exceed \$5.00 per 100 linear feet.

(Prior approval of the county committee must be obtained.)

SPECIFICATIONS: The grade of the terrace channel may be variable but must not exceed 6 inches per 100 feet, except that, with prior approval of the county committee, diversion terraces constructed in nonerosive materials may be approved at a grade in excess of the 6-inch fall.

Fills in terraces must be built to sufficient height across gullies so that they will be above normal level of terrace ridge after settling.

The channel and outlet end of the terrace must be protected against erosion.

The cross-sectional area of the settled terrace channel must be 10 square feet for drainage areas of 3 acres or less, plus 1 square foot for each additional acre of drainage up to 10 acres, plus 4 square feet for each additional 10 acres.

3. ESTABLISHING A VEGETATIVE WATERWAY - \$16.00 per acre.

SPECIFICATIONS: The waterway must have an average width of not less than 10 feet and a grade of not over 10 percent. The channel must be sufficiently wide at all points to carry the water under conditions of maximum rainfall.

For 1 to 6 acres of drainage area, the average width of the waterway must be at least 10 feet; from 7 to 10 acres at least 18 feet; and for each additional 5 acres up to 115 acres, the width must be increased 2 feet. Not less than one sod piece (or the equivalent in sprigs) of Bermuda or vine mesquite (wire grass) for each 4 square foot or not less than one sod piece of buffalo for each 16 square foot is required. In areas of limited rainfall, sodding

of buffalo grass is recommended on heavy land. Vine mesquite sod is recommended for light to sandy soils. A good vegetative cover must be obtained in the channel.

Phosphate should be applied where needed.

4. CONSTRUCTING OR ENLARGING DRAINAGE DITCHES.

(Prior approval of the county committee must be obtained.)

(a) For irrigated land - 8 cents per cubic yard, but not to exceed \$5.00 per 100 linear feet.

(b) For nonirrigated land - 8 cents per cubic yard, but not to exceed \$3.00 per 100 linear feet.

SPECIFICATIONS: Where a ditch is to be enlarged, measurements of the width and depth shall be made before construction is started.

Ditches must be bordered on at least one side by cropland or noncrop open pasture or range land. Two ditches constructed adjacent to each other, with the dirt placed between forming a ridge, will qualify. Ditches used in the reclamation of swamp land or other land considered normally under water will not qualify. The ditches should follow the course of the natural drainage as nearly as possible. Ditches must have an average cross-section of not less than 3 square feet. The grade may be variable, but must not exceed 3 inches per 100 feet. The outlet must be protected against erosion.

Ditches to control excess water from terrace systems may be given a fall in excess of 3 inches per 100 feet, provided they are protected from erosion.

5. REORGANIZATION OR IMPROVEMENT OF AN IRRIGATION SYSTEM.

(Prior approval of the county committee must be obtained.)

(a) Leveling of land for irrigation (applicable only to land leveled for the first time in 1945); the land must be such that a fresno or other equipment of similar type will have to be used - 6 cents per cubic yard of earth moved, but not in excess of \$5.00 per acre.

(b) Lining permanent ditches with cloth, bentonite, oil, or asphalt-treated soil or impervious clay material for the prevention of seepage or loss of water - 5 cents for each square yard lined.

(c) Installation of culverts, flumes, dams, drops, weirs, or the lining of permanent irrigation ditches to prevent erosion

or failure of the farm irrigation system from flood, or the construction or relocation of permanent laterals, dikes, or borders:

- (1) Concrete construction - \$9.00 per cubic yard.
- (2) Rubble-masonry construction - \$6.00 per cubic yard.
- (3) Home-treated lumber construction - 3-3/4 cents per board foot.
- (4) Commercially treated lumber construction - 5-1/4 cents per board foot.
- (5) Corrugated metal culvert - \$2.00 per linear foot of 24-inch diameter or its equivalent.
- (6) Concrete pipe - \$1.50 per linear foot of 24-inch concrete pipe or its equivalent.
- (7) Earth moved in leveling land already under irrigation and for the construction of dams and the construction or relocation of permanent laterals, dikes, or borders - 8 cents per cubic yard of earth moved, not to exceed \$8.00 per acre.
- (8) Installation of log or rock cribbing - \$1.50 per cubic yard.
- (9) Small concrete pipe (1-1/2 to 2 inches in diameter) - 10 cents per linear foot.

6. CONSTRUCTION OF EARTHEN DAMS OR RESERVOIRS.

(Prior approval of the county committee must be obtained.)

- (a) Material moved in the construction of a dam - 10 cents per cubic yard.
- (b) Material moved in the construction of a damless tank - 8 cents per cubic yard.

SPECIFICATIONS: When the county committee determines that any existing reservoir does not provide sufficient water for live-stock, the dam may be enlarged at the rate and under the specifications for the construction of a new dam.

If the dam will be 8 feet or more in height or will contain as much as 300 cubic yards of earth, or in all cases where the surface of the ground is extremely irregular, a preliminary survey shall be made.

A trench at least 4 feet wide and deep enough to reach a reasonably impervious subsoil must be dug along the center line of the dam. This trench should be filled with the most impervious soil readily available to form the base of a core of this same material, which should be carried to a height equal to the normal water level. All sod, brush, and shrubs should be removed from the base of the structure before construction

begins. The entire base of the dam should be scarified to insure better bonding of the fill with the base of the dam. Where dams are built across gullies with steep banks, these banks should be sloped for better bonding with the fill.

Dams and spillways must be adequate. The downstream slope of the dam should be at least 2:1. The upstream slope should be at least 3:1. The top width of the dam shall be a minimum of 3 feet and must be increased in accordance with the height of the dam, the size of the drainage area, the capacity of the spillway, and other local conditions. Small spreader dams may have a minimum settled height of 20 inches above the floor of the spillway and a cross-sectional area of not less than 10 square feet above the normal ground line. Reservoirs for livestock water must have a depth of at least 6 feet, except in those cases in which the county committee determines that the soil type will not permit this depth.

The cross-sectional area of the spillway shall be at least twice the cross-sectional area of the stream at its highest flood stages in the past. The top of the settled dam must be at least 3 feet above the floor of the spillway and this distance shall be increased, if necessary, to prevent water from running over the dam during floods. Unless the spillway is naturally protected from damaging erosion, protection must be provided. The end of the dam shall be riprapped or otherwise protected against erosion if it forms a part of the spillway.

When practicable, a pipe should be installed through the lowest portion of the dam to provide for draining the pond. The drain pipe should be laid on firm material. Joints of the pipe should be calked with care and all backfill firmly tamped around the pipe before the fill is placed above. The pipe should be extended 5 feet beyond the toe of the fill. This extension should be supported on rock or concrete and fixed in place with tamped dirt. Sufficient rock riprap should be laid around the end of the pipe to reduce erosion. About half way of the length of the pipe through the dam, a concrete collar with a radius of about 2 feet 6 inches should be placed around the pipe.

To compensate for shrinkage and settling, the gross volume of earth used in the construction of the dam shall be reduced by 20 percent if draglines are used, 15 percent if bulldozers are used, and 10 percent if any other method of construction is followed.

7. CONSTRUCTION OF CONCRETE OR RUBBLE-MASONRY DAMS OR DROPS.

(Prior approval of the county committee must be obtained. Unless prior approval of the State committee is obtained, all dams must be constructed on solid rock.)

(a) Concrete - \$9.00 per cubic yard.

(b) Rubble-masonry - \$6.00 per cubic yard.

SPECIFICATIONS: Where the county committee determines that any existing dam does not provide sufficient water for livestock or is not sufficient for proper erosion control, the dam may be enlarged at the rate and under the specifications for the construction of new dams.

Dams will be approved only on rough or broken noncrop open pasture and range land for providing range livestock with water, or for erosion control where earthen dams or reservoirs are impracticable and where there is no possibility of using the water for irrigation purposes. Concrete drops may be constructed where it is impossible to control flood waters by any other method. Drops will be installed in series to reduce soil erosion.

Rubble-masonry dams shall have a base width equal to at least six-tenths of the sum of the height of the dam plus the anticipated depth of any overflow. The thickness of the dam at the top shall be at least 24 inches, except where dams are 8 feet or less in height, the minimum thickness at the top may, upon approval of the State committee, be reduced to not less than 18 inches. All rock laid shall meet the standards of good workmanship.

The entire foundation for the base of the dam shall be sufficiently scarified to expose an unweathered rock surface to insure satisfactory bonding of materials. The base shall be cleaned of all loose material before laying the mortar for the base stones. In addition to scarifying the base, a trench shall be cut 4 inches deep and 12 inches wide, or reinforcing steel at least 1 inch in diameter shall be set in cement in the foundation rock at least 3 inches deep and extend 12 inches above the foundation and spaced not more than 2 feet apart parallel with the lengthwise center line of the dam. The trench or reinforcing steel should be located within the middle one-third of the crosswise width of the base. Both the trench and reinforcing steel may be used where it is considered advisable in order to prevent seepage and sliding. No blasting shall be done in constructing the trench. The upstream face of the dam may be covered with a waterproof coating of cement mortar. This coating should extend

over the top of the dam, but need not extend all the way down the downstream side of the structure. Where this "plaster coat" is not applied to the upstream face of the dam, the top of the dam must be waterproofed with mortar.

Concrete dams. Solid concrete gravity-type dams may be constructed according to the specifications given for rubble-masonry dams. In those dams, a mixture of one part of Portland cement to three parts of sand and five parts of crushed rock or gravel may be used. No rock "filler" may be used in the body of the dam which is wider than one-half the width of the dam at the point where used. If a concrete dam other than of the solid concrete gravity type is to be installed, detailed plans showing the method of reinforcing, buttressing, etc., together with data on the site and the materials to be used, shall be submitted through the county committee to the State committee for approval before construction is started.

Drops. The opening in the drop shall be of sufficient size to provide for maximum flow of water. The cut-off walls under the drops, the apron, and the wing walls should be constructed in such a manner as to prevent the water from running under and around the structure.

8. DRILLING OR DIGGING WELLS.

(Prior approval of the county committee must be obtained.)

- (a) Wells (except artesian) with casing not less than 4 inches in diameter - \$2.00 per linear foot.
- (b) Artesian wells and wells with casing less than 4 inches but not less than 2 inches in diameter - \$1.00 per linear foot.

SPECIFICATIONS: Wells will be approved only for better distribution of watering places for livestock on noncrop open pasture and range land. Wells must be cased to prevent caving. Except in the case of artesian wells, the producer is required to erect or install a windmill or power pump, together with adequate pumping equipment and water tanks. A well at or near farm headquarters will not qualify. A dry hole will not qualify. An artesian well will qualify if sufficient water is made available and is carried to one or more adequate tanks or troughs.

9. INSTALLING PIPE LINES.

(Prior approval of the county committee must be obtained.)

(a) New pipe

- (1) 1-inch pipe - 10 cents per linear foot
- (2) $1\frac{1}{4}$ -inch pipe - 13 cents per linear foot
- (3) $1\frac{1}{2}$ -inch pipe - 16 cents per linear foot
- (4) 2-inch pipe - 21 cents per linear foot

(b) Used pipe

- (1) 1-inch pipe - 6 cents per linear foot
- (2) $1\frac{1}{4}$ -inch pipe - 8 cents per linear foot
- (3) $1\frac{1}{2}$ -inch pipe - 10 cents per linear foot
- (4) 2-inch pipe - 13 cents per linear foot

SPECIFICATIONS: Pipe lines must be laid from wells, springs, or storage tanks for the purpose of providing an adequate water supply for livestock. A screen of about $1/4$ -inch mesh should be provided for the upper end of the pipe where the water leaves the springs or storage tanks. Where crossing streams, roads, or trails, pipe lines should be well buried. Pipe lines should be adequately protected against freezing. Long pipe lines or those rigidly fixed at both ends should be provided with expansion joints. The pipe line may cross land not controlled by the operator, provided a permanent easement or right-of-way is secured from the person or agency controlling the land.

This practice is applicable only to farms having 640 acres or more of noncrop open pasture and range land. The total payment for this practice shall not exceed 6 cents for each acre of non-crop open pasture or range land used in computing the farm allowance less the amount of payment earned for carrying out the deferred grazing practice (number 26). Payment will not be made if, on the basis of a utilization survey made near the end of the program year, it is indicated good range management has not been followed. Payment may be made, however, in cases where the range forage has been damaged by causes beyond the control of the operator, provided the rate of stocking is at or below the established carrying capacity.

10. CONTOUR FURROWING NONCROPLAND.

(Prior approval of the county committee must be obtained.)

- (a) Furrows with 60 square inches cross section and not less than 5 inches deep constructed with dams at intervals of not to exceed 12 feet - $2\frac{1}{2}$ cents per 100 linear feet.

- (b) Furrows with 60 square inches cross section and not less than 5 inches deep without dams - 2 cents per 100 linear feet.
- (c) Furrows with a minimum of 32 square inches cross section and not less than 4 inches deep or chiseling not less than 8 inches deep - 1-1/2 cents per 100 linear feet.

SPECIFICATIONS: Guide lines must be run at one-half the terrace interval, except that, with the approval of the county committee, in regions of low annual rainfall, the surveyed guide lines may be spaced at regular terrace intervals, provided that furrows not surveyed must be dammed and must be parallel to the guide lines. If furrows are spaced less than 7 feet apart, the extent of the practice will be computed as if the furrows were spaced 7 feet apart.

11. STRIP CROPPING ON THE CONTOUR - \$1.00 PER ACRE.

SPECIFICATIONS: On land subject to wind erosion, the contour strips must consist of sorghums, millet, or summer legumes (except peanuts), in rows or solid-seeded, or other solid-seeded crops alternating with strips of other row crops or fallow. Each strip must be at least 10 feet wide, but not more than 200 feet wide. The strips of sorghums, millet, summer legumes, or other solid-seeded crops must occupy at least 25 percent of the field and there must be at least two strips of each crop in each field.

On land not subject to wind erosion, the contour strips must consist of solid-seeded crops alternating with row crops or with fallow, or both row crops and fallow. Each strip must be at least 10 feet wide, but not more than 200 feet wide, and the strips of solid-seeded crops must occupy at least 25 percent of the field. There must be at least two strips of each crop in each field.

12. FIELD STRIP CROPPING NOT ON THE CONTOUR - 35 CENTS PER ACRE.

(Applicable only to farms where the county committee determines it is needed as a protection against wind erosion.)

SPECIFICATIONS: The strips must consist of sorghums in rows or solid-seeded, or other solid-seeded crops alternating with strips of other row crops or fallow. The strips of sorghums or other solid-seeded crops must not be less than 10 feet wide nor more than 200 feet wide and must occupy not less than 25 percent nor more than 50 percent of the field. There must be at least two strips of each crop in each field.

13. DEEP PLOWING OF SANDY CROPLAND TO PREVENT WIND EROSION -
\$1.50 PER ACRE.

(Prior approval of the county committee must be obtained. Applicable only to sandy soils in Wilbarger, Knox, Haskell, Stonewall, Kent, Garza, Lynn, Dawson, and Andrew Counties and counties lying north and west of these counties where needed as a protection against wind erosion.)

SPECIFICATIONS: Land must be broken to a depth of not less than 10 inches in a manner that will bring the heavier soil to the top to hold the shifting top sandy layer. Deep plowing must be done at least 30 days before seeding.

14. PROTECTING SUMMER-FALLOWED ACREAGE:

- (a) By contour listing or furrowing or by pit cultivating not later than June 15, 1945 - 75 cents per acre.
- (b) By otherwise incorporating the stubble and other trash into the surface soil not later than June 15, 1945, if prior approval of the county committee is obtained - 50 cents per acre.

(Applicable only to acreage from which no crop is harvested in 1945 in Clay, Jack, Palo Pinto, Brath, Hamilton, Lampasas, Burnet, Blanco, Kendall, Bandera, Medina, Atascosa, Live Oak, Jim Wells, and Kleberg Counties and all counties lying west of these counties.)

SPECIFICATIONS: The acreage must be kept sufficiently free of vegetative cover so that available moisture is conserved. If the county committee determines that additional cultural operations are needed, they must be carried out.

This practice when carried out on light sandy soils or on soils in any area where destruction of the vegetative cover results in the land's becoming subject to serious wind erosion will not qualify. Contour listing or furrowing or pit cultivation qualifying under this practice will not qualify under practice 15 or 18. Summer-fallowed acreage qualifying under this practice will not qualify under practice 11 or 12.

15. CONTOUR LISTING OR FURROWING OF CROPLAND OR LAND PLANTED TO CROPS IN 1945 - 30 CENTS PER ACRE.

(Not applicable to irrigated land.)

SPECIFICATIONS: The furrows must be made with a lister, a shovel-type implement, or other implements accomplishing similar results. The furrows must not be less than 12 inches apart nor more than 4 feet apart. The furrows must be at least 4 inches deep or, if chiseled, they must be at least 8 inches deep. The furrowing must be done with the contour of the land following guide lines not to exceed twice the terrace interval or following terraces.

On slopes averaging greater than 3 feet to each 100 feet, the contour listing or furrowing must be in combination with terracing. Contour listing or furrowing as a part of a seeding operation or contour listing or furrowing within 60 days prior to seeding will not qualify. Acreage qualifying under practice 16 or 17 will not qualify.

16. CONTOUR FARMING INTERTILLED CROPS - 40 CENTS PER ACRE.

(Not applicable to irrigated land.)

SPECIFICATIONS: This practice consists of planting and cultivating row crops following the contour as determined by a level or following terraces. If the land is not terraced, the rows must follow guide lines not to exceed twice the terrace interval. Acreages qualifying under practice 11 or contour farming on slopes exceeding 3 percent unless in combination with terracing will not qualify.

17. SEEDING DRILLED CROPS ON THE CONTOUR - 25 CENTS PER ACRE.

(Not applicable to irrigated land.)

SPECIFICATIONS: All operations, except breaking, must be done on the contour. The crop must be solid-seeded with a grain drill or other implement accomplishing similar results. Seeding must follow guide lines not to exceed twice the terrace interval or must follow terraces. Acreage qualifying under practice 11 will not qualify.

18. PIT CULTIVATION - 20 CENTS PER ACRE.

SPECIFICATIONS: Pit cultivation must be done with a basin lister which will dam the lister furrows at regular intervals or with an implement accomplishing similar results. The furrows must not be less than 20 inches nor more than 4 feet apart and not less than 4 inches deep, and the pits or basins must occupy at least 25 percent of the land. On slopes greater than 3 percent, basin listing must be done on the contour following guide lines not to exceed the terrace interval or following terraces. Pit cultivation as a part of a seeding operation or pit cultivation within 30 days prior to seeding will not qualify.

19. BORDER PLANTING OF SORGHUMS OR MILLET - 35 CENTS PER ACRE.

(Applicable only in Armstrong, Dallam, Deaf Smith, Hansford, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Potter, Randall, Sherran, Andrews, Bailey, Castro, Cochran, Gaines, Hookley, Lamb, Parmer, Terry, and Yoakum Counties.)

SPECIFICATIONS: The stalks (at least 8 inches high) of border-planted crops are to be left on the land. The border shall not be less than 100 feet wide on four sides of the field, unless a fewer number of sides of the field are approved by the county committee. The extent of this practice shall be limited to the acreage occupied by the border, but not more than 20 percent of the field.

20. LEAVING ON THE LAND AS A PROTECTION AGAINST WIND EROSION THE STALKS OR STUBBLES OF SORGHUMS OR MILLET - 20 CENTS PER ACRE.

(Applicable only to farms where it is determined by the county committee that such cover is necessary as a protection against wind erosion and the operator's farming plan provides that it will be left on the land until the spring of 1946 and not grazed.)

SPECIFICATIONS: The stalks (at least 10 inches high) of sorghums or millet listed or drilled in rows not more than 4 feet wide, or a good turf of Sudan grass, sorghums, or millet when drilled with spacing not more than 20 inches wide, must be left on the land. Acreage qualifying under any other practice will not qualify.

21. CONTROL OF DESTRUCTIVE PLANTS ON NONCROP PASTURE AND RANGE LAND.

(Prior approval of the county committee must be obtained. Prior approval will not be given to a combination of parts of this practice for the same acreage which will result in a payment of more than \$5.00 per acre. If the county committee determines that the control of destructive plants will reduce the vegetative cover to such an extent as to increase soil erosion, artificial reseeding shall also be required where soil and climatic conditions permit.)

(a) Eliminating pricklypear and cactus:

- (1) Light infestation, 3 to 6 percent, inclusive - \$1.00 per acre.
- (2) Medium infestation, 7 to 12 percent, inclusive - \$1.50 per acre.
- (3) Heavy infestation, above 12 percent - \$2.00 per acre.

(b) Eliminating mesquite and huisache:

- (1) Light infestation, 5 to 20 percent, inclusive - \$1.50 per acre.
- (2) Medium infestation, 21 to 40 percent, inclusive - \$3.00 per acre.
- (3) Heavy infestation, above 40 percent, - \$5.00 per acre.

(c) Eliminating cedar:

- (1) Light infestation, 5 to 15 percent, inclusive - \$1.00 per acre.
- (2) Medium infestation, 16 to 30 percent, inclusive - \$2.00 per acre.
- (3) Heavy infestation, above 30 percent - \$3.00 per acre.

(d) Eliminating noxious underbrush, bushes, and shrubs:

- (1) Light infestation, 5 to 20 percent, inclusive - \$1.50 per acre.
- (2) Medium infestation, 21 to 40 percent, inclusive - \$3.00 per acre.
- (3) Heavy infestation, above 40 percent - \$5.00 per acre.

(e) Eliminating lechuguilla:

- (1) Light infestation, 3 to 6 percent, inclusive - \$1.00 per acre.
- (2) Medium infestation, 7 to 12 percent, inclusive - \$1.50 per acre.
- (3) Heavy infestation, above 12 percent - \$2.00 per acre.

SPECIFICATIONS: The degree of infestation will be determined by judging the density in accordance with the percentage of the ground covered by the total spread of the trees or plants. Where infestation is less than the minimum percent shown under each of the above practices, coverage will be calculated by counting two or more acres as one, not to exceed four acres as one.

22. RENOVATION OF BERMUDA GRASS PASTURES - 50 CENTS PER ACRE.

SPECIFICATIONS: The sod must be loosened by the use of a disk or other implement accomplishing similar results.

23. MOWING ESTABLISHED PASTURES - 50 CENTS PER ACRE.

SPECIFICATIONS: Pastures must be mowed as often as necessary to control weeds and shrubs. The plants mowed must not be used for feed nor sold for any purpose.

24. ERADICATION OF PRAIRIE DOGS, GOPHERS, AND KANGAROO RATS - COST OF BLIT OR POISON.

SPECIFICATIONS: The extent of this practice will be based on the actual area infested and 100 percent eradication must be secured by poisoning.

Sales receipts or other supporting evidence will be required.

25. ESTABLISHING OR MAINTAINING FIREGUARDS ON MONOCROP OPEN PASTURE AND RANGE LAND:

- (a) Established in 1945 - 7-1/2 cents per 100 linear feet.
- (b) Maintained but not established in 1945 - 5-3/4 cents per 100 linear feet.

SPECIFICATIONS: Fireguards must not be less than 10 feet in width and must be constructed by exposing the mineral soil by plowing furrows or by other mechanical means. All vegetation in the fireguard must be destroyed. Erosion and gullying should be controlled by diversion dams or other approved methods.

26. DEFERRED GRAZING.

(Limited to 25 percent of the noncrop open pasture and range land. Applicable only to farms having 640 acres or more of noncrop open pasture and range land. Not applicable to noncrop open pasture and range land which normally is not used for grazing.)

- (a) Deferred for 5 consecutive months - 10 cents per acre .
- (b) Deferred for 3 consecutive months but less than 5 - 5 cents per acre.

SPECIFICATIONS: The operator must submit to the county committee in writing the designation of the deferred grazing acreage and the date for the beginning of the nongrazing period before carrying out the practice. The beginning of the nongrazing period shall be set by the county committee.

The area deferred must be kept free of livestock during the deferred grazing period. The noncrop open pasture and range land not in the deferred grazing area must not be pastured to such an extent as will decrease the stand of grass or injure the forage, tree growth, or watershed.

27. SEEDING PERMANENT PASTURE GRASSES.

(Prior approval of the county committee must be obtained. With the exception of Bermuda, Rhodes, weeping lovegrass, and blue panic, two or more grasses must be established on the area.)

<u>Kind of seed</u>	<u>Payment rate per pound</u>
(a) Bermuda (unhulled)	\$ 0.70
(b) Bermuda (hulled)	0.85
(c) Carpet	0.40
(d) Rhodes	0.50
(e) Buffalo (in bur)	0.80
(f) Buffalo (clean naked)	1.00
(g) Dallis	0.30
(h) Weeping lovegrass	2.50
(i) Sand lovegrass	1.00

(j)	Sand dropseed or sand bluestem	0.15
(k)	Little bluestem	0.30
(l)	Big bluestem	0.30
(m)	Blue or hairy grama	0.30
(n)	Side-Oats grama	0.45
(o)	Western or crested wheatgrass	0.25
(p)	Canada wild-rye	0.25
(q)	Blue panic	0.50

SPECIFICATIONS: Home-grown seed should be tested for purity and germination before planting. Seed should be planted on a well-prepared seedbed on fertile soil and weeds controlled. Plowed land should be thoroughly packed in advance of seeding. The land should be firm with sufficient moisture for germination and growth of grass seedlings. Gullying should be prevented or controlled. Low wet land should be drained.

If recommended by the county committee, land subject to wind erosion must be protected by the crop residue of Sudan grass or other sorghums grown the preceding year, and preferably mowed before seed maturity, and grass seed should be drilled on the old crop residue without otherwise disturbing it.

Seeding should be done in the spring at early corn-planting time (or in the fall at oat-planting time on the Coast Prairie).

For Bermuda, 5 pounds of unhulled seed or 4 pounds of hulled seed per acre is recommended for East Texas, Coast Prairie, Blackland, West Cross Timbers, and Grand Prairie on highly fertile soil and Rolling Plains on sandy soil.

For carpet, 4 pounds of seed per acre is recommended for East Texas on low moist pine timber land and for Coast Prairie.

For Rhodes, 6 pounds of seed per acre is recommended for Rio Grande Plains and eastward to the Colorado River on tillable land.

For buffalo, 5 pounds of seed in the bur or 1 pound of clean naked seed per acre is recommended for High Plains, Rolling Plains, Edwards plateau, Grand Prairie, Blackland, West Cross Timbers, Rio Grande Plains, and west of the Pecos River on clay loam to loamy soil.

For Dallis, 6 pounds of seed per acre is recommended when seeded in a mixture containing not less than one-third Bermuda grass or carpet grass in East Texas and Coast Prairie on fertile clay loam to fine sandy soil.

For weeping lovegrass, 1 pound of seed per acre is recommended for High Plains, Rolling Plains, West Cross Timbers, Blackland, and Edwards Plateau.

For sand lovegrass, sand dropseed, the bluestems, the gramas, the wheatgrasses, and Canada wild-rye grass, 8 pounds of seed per acre is recommended for areas where these grasses may be found growing normally under conditions comparable to those where planting is to be done.

For blue panic grass, 1 pound of seed per acre is recommended for arable land south of a line drawn east and west through Waco. After seeding, the land should be press drilled or rolled. Acreage qualifying under practice 28 or 29 will not qualify.

Sales receipts or other supporting evidence will be required.

28. SODDING BERMUDA, BUFFALO, OR DALLIS GRASS - \$5.00 PER ACRE.

(Prior approval of the county committee must be obtained.)

SPECIFICATIONS: These grasses may be transplanted locally from where they may be found growing naturally to other locations of similar conditions, or they may be introduced into the following areas under the following conditions:

Buffalo and Bermuda for the area under practice 27.
Dallis for East Texas and Coast Prairie when sodded
in a mixture containing 75 percent of Bermuda.

Sod should be planted on a well-prepared seedbed and weeds should be controlled. The land should be firm and gullying should be prevented or controlled. Furrows for sodding should be on the contour. Where necessary, erosion should be checked by sodding in strips alternating with strips of undisturbed vegetation until sodded strips are well established. Low wet land should be drained. Sodding should be done only where there is sufficient moisture for continuous growth and at not less than one sod piece (or its equivalent in sprigs for Bermuda) of the above-named grasses for each 16 square feet. At least 60 percent of the grass sodded must survive.

29. SEEDING PASTURE GRASSES OR LEGUMES ON SOD LAND.

(Prior approval of the county committee must be obtained. Applicable only to land on which one or more perennial grasses are already established.)

<u>Kind of seed</u>	<u>Payment rate per pound</u>
(a) Bermuda grass	\$ 0.70
(b) Dallis grass	0.30
(c) Rescue grass	0.20
(d) White Dutch clover	0.75
(e) Persian clover	0.35
(f) Hop clover	0.55
(g) Common lespedeza	0.20
(h) Kobe lespedeza	0.15
(i) Korean lespedeza	0.10
(j) Melilotus indica	0.052
(k) Hubam clover	0.12
(l) Sweet biennial clover	0.15
(m) Bur-clover (clean seed)	0.35
(n) Bur-clover (unhulled seed)	0.08
(o) Black medic	0.25
(p) Buffalo grass	0.80
(q) Bluestem grasses	0.30
(r) Grama grasses	0.30

SPECIFICATIONS: This practice is limited to regions of 25 or more inches of average rainfall or, in lower rainfall areas, to irrigated or moist bottom land, terraces, or where there is an accumulation of moisture in excess of rainfall. Each species must be known to grow under conditions comparable to the area to be planted. Seed must be drilled, broadcast and disked or harrowed, or mixed with manure and spot-dropped, except where broadcast seeding alone has been proved successful.

Sales receipts or other supporting evidence will be required.

30. HARVESTING LEGUME AND GRASS SEED - \$3.50 PER ACRE

(The maximum acreage is limited to 25 acres per farm.)

SPECIFICATIONS: A minimum production of seed in the amount indicated below must be obtained:

<u>Variety</u>	<u>Pounds per acre (clean seed equivalent)</u>
Rhodes grass	40
Ryegrass	300
Rescue grass	300
Buffalo grass	20
Carpet grass	60
Weeping lovegrass	50
Bluestem grass	30
Side-oats grama	200
Blue grama grass	35
Grama grass mixture	35
Hop clover	45
White Dutch clover	70
Bur-clover	70
Sweetclover	200
Lespedeza Scircea	180
Vetch	180
Crotalaria	350
Annual lespedeza (except Korean)	190
Alfalfa	135

A seed purity test should be made. Harvesting must be done in a workmanlike manner and the seed properly cured and stored if retained on the farm. If the production of the seed per acre is less than that indicated, payment may be calculated on an equivalent production; for example, if 20 pounds of Rhodes grass seed is harvested per acre, 2 acres will be counted as 1.

Sales receipts or other supporting evidence will be required.

31. ESTABLISHING A SATISFACTORY COVER OF WINTER LEGUMES SEEDED IN THE FALL OF 1944.

<u>Kind of seed</u>	<u>Payment rate per pound</u>
(a) Austrian winter peas	\$ 0.071
(b) Hairy vetch	0.132
(c) Common vetch	0.081
(d) Willamette vetch	0.086
(e) Bur-clover (hulled)	0.50 (not to exceed \$4.00 per acre)
(f) Melilotus indica	0.052
(g) Hubam clover	0.12
(h) Singletary peas	0.095

SPECIFICATIONS: Winter legume seed should be properly inoculated with fresh inoculants and seeded not later than December 1, 1944. Phosphate should be applied in all areas where needed. The following seeding rates per acre are recommended:

Austrian winter peas or singletary peas - 28 pounds
Hairy, common, or Willamette vetch - 20 pounds
Bur-clover (hulled) - 10 pounds
Hubam clover or Melilotus indica - 15 pounds broadcast or
5 pounds in rows

It is not recommended that Hubam clover or Melilotus indica be planted in the fall north of a line drawn to include Kinney, Kendall, Comal, Hays, Travis, Williamson, Bell, Falls, Robertson, Madison, Walker, Montgomery, Liberty, Jefferson, and Orange Counties.

A satisfactory cover will be deemed to have been established when the land is uniformly covered with a growth from which a reasonable tonnage of forage could be harvested.

Sales receipts or other supporting evidence will be required.

32. ESTABLISHING A SATISFACTORY COVER OF RYEGRASS SEEDED ON CROPLAND IN THE FALL OF 1944 - \$2.00 PER ACRE.

SPECIFICATIONS: Ryegrass should be seeded at oat-planting time on land that has been allowed to become well settled after being plowed, or it may be seeded on land that has not been disturbed following the harvest of cotton, corn, or other crops. The recommended seeding rate is 17 pounds per acre. A satisfactory cover will be deemed to have been established when the land is uniformly covered with a growth from which a reasonable tonnage of forage could be harvested.

33. ESTABLISHING A SATISFACTORY COVER OF KUDZU - \$6.00 PER ACRE.

SPECIFICATIONS: A good seedbed should be prepared prior to setting the kudzu plants and at least 200 pounds of superphosphate should be applied per acre. At least 500 crowns must be planted per acre and there must be a survival of at least 250 plants. Weeds and grass should be controlled during the first growing season. The plants should be cultivated until the land is covered with vines.

34. ESTABLISHING GREEN MANURE OR COVER CROPS - \$1.50 PER ACRE.

SPECIFICATIONS: The eligible crops are summer legumes (except soybeans for beans and peanuts), Sudan grass, sweet sorghums, and small grains (except wheat and those qualifying under

practice 35). If legumes are planted in normally spaced rows or strips between rows or strips of another crop, only the acreage occupied by the legume may qualify. Second growth crops will not qualify.

Soybeans harvested for beans, peanuts, alfalfa, Rhodes grass, grain sorghums, truck and vegetable crops, wheat, and small grains which qualify under practice 35 will not be considered eligible crops. Summer legumes interplanted in the same row with or planted between normally spaced rows of another crop will not qualify.

The crop must be grown on cultivated land. A good stand and good growth must be obtained. A good growth is a growth that would justify harvesting as a feed crop. The crop must be left on the land or turned under. If turned under, it should be followed by a fall-sown crop where necessary to control erosion.

35. ESTABLISHING A SATISFACTORY COVER OF SMALL GRAINS (EXCEPT WHEAT) SEEDED IN THE FALL OF 1944 - \$1.50 PER ACRE.

SPECIFICATIONS: A satisfactory cover will be deemed to have been established when the land is uniformly covered with a growth from which a reasonable tonnage of forage could be harvested. No payment will be made for small grains when harvested for grain.

36. APPLICATION OF 60-PERCENT POTASH (OR ITS EQUIVALENT) - \$2.05 PER 100 POUNDS.

SPECIFICATIONS: See specifications following practice 37.

37. APPLICATION OF 20-PERCENT SUPERPHOSPHATE (OR ITS EQUIVALENT):

\$1.05 per 100 pounds in Lipscomb, Hemphill, Wheeler, Collingsworth, Childress, Cottle, King, Stonewall, Fisher, Nolan, Coke, Tom Green, Schleicher, Sutton, Edwards, and Kinney Counties and counties lying west of these counties; Maverick, Zavala, Frio, Atascosa, Live Oak, and San Patricio Counties and counties lying south of these counties.

95 cents per 100 pounds in all other counties.

SPECIFICATIONS FOR PRACTICES 36 AND 37:

The material should be evenly applied. Phosphate should be worked into the soil. The material must be applied to or in connection with a full seeding of perennial or biennial legumes, perennial grasses, winter legumes, ryegrass, permanent pastures, summer legumes (excluding soybeans for beans and peanuts), or a

mixture of winter legumes and small grain (except wheat), provided the mixture contains at least 25 percent by weight of winter legumes and the grain is not harvested for grain. The material may also be applied to cover crops, such as small grains and legumes grown in orchards or on land on which potatoes or vegetables are grown in 1945. In the case of lespedeza seeded with fall-seeded small grains, the material must be applied not later than July 15, 1945.

Sales receipts or other supporting evidence will be required.

38. APPLICATION OF GROUND LIMESTONE OR GROUND OYSTER SHELLS:

\$3.15 per ton in Aransas, Bee, Brooks, Calhoun, Cameron, Hidalgo, Jim Wells, Kenedy, Kleberg, Live Oak, Nueces, Orange, Refugio, San Patricio, Starr, and Willacy Counties.

\$3.00 per ton in Austin, Brazoria, Cass, Chambers, Colorado, Dewitt, Fort Bend, Freestone, Galveston, Goliad, Gonzales, Guadalupe, Hardin, Harris, Jackson, Jasper, Jefferson, Karnes, Liberty, Matagorda, Newton, Polk, Sabine, San Augustine, San Jacinto, Tyler, Victoria, Walker, Wharton, and Wilson Counties.

\$2.90 per ton in Angelina, Bastrop, Bowie, Caldwell, Fayette, Grimes, Harrison, Houston, Lavaca, Lee, Madison, Marion, Montgomery, Nacogdoches, Panola, Rusk, Shelby, Waller, and Washington Counties.

\$2.75 per ton in Anderson, Brazos, Burleson, Camp, Cherokee, Franklin, Gregg, Leon, Milam, Morris, Red River, Robertson, Smith, Titus, Trinity, and Upshur Counties.

\$2.60 per ton in Delta, Eastland, Falls, Fannin, Grayson, Henderson, Hopkins, Lamar, Limestone, Rains, Van Zandt, and Wood Counties.

\$2.00 per ton in Cooke, Denton, Erath, Hill, Hood, Hunt, Jack, Johnson, Kaufman, Navarro, Palo Pinto, Parker, Rockwall, Stephens, Tarrant, Wichita, and Wise Counties.

SPECIFICATIONS: The material must be evenly distributed. Limestone must be of sufficient fineness for 75 percent to pass through a 10-mesh sieve, 30 percent to pass through a 40-mesh sieve, and 20 percent to pass through a 100-mesh sieve. Oyster shells must be of sufficient fineness so that 50 percent will pass through a 60-mesh sieve and .98 percent through a 10-mesh sieve.

Sales receipts or other supporting evidence will be required.

39. APPLICATION OF AGRICULTURAL SULPHUR (OR ITS EQUIVALENT) - \$1.30 per 100 pounds.

(Prior approval of the county committee must be obtained.)

SPECIFICATIONS: Sulphur applied as an insecticide will not qualify. Sales receipts or other supporting evidence will be required.

40. ESTABLISHING FIREBREAKS FOR THE PROTECTION OF FARM WOODLAND - 20 cents per 100 linear feet.

SPECIFICATIONS: The firebreaks must be at least 10 feet wide and cleared to mineral soil of all inflammable materials. These woodland areas must be divided into blocks of not more than 40 acres nor less than 10 acres each by firebreaks established under this practice. This firebreak must include the outside boundary of the woodland. The areas protected must be unburned during the year.

41. PLANTING FOREST TREES (INCLUDING SHRUBS IN PROTECTIVE PLANTINGS)- \$5.00 per acre.

(Prior approval of the county committee must be obtained.)

SPECIFICATIONS: When planting in plowed furrows, the plowing should be done along contours. Heavy brush should be eliminated. For windbreaks, one row of shrubs spaced not more than 4 feet apart, together with two or more rows of trees spaced not more than 8 feet apart, with a space between rows of not less than 6 feet nor more than 12 feet, with a minimum survival of 65 percent is required. For woodlots and forest plantations, a semi-regular 6 by 8 foot spacing, or approximately 1,000 trees per acre, for pines, and an 8 by 8 foot spacing, or approximately 700 trees per acre, for hardwoods, is required, with a survival of 65 percent.

Species recommended for planting:

In the Pine-Hardwood Region (Red River, Franklin, Wood, Smith, Henderson, Anderson, Houston, Walker, Grimes, Montgomery, Harris, and Chambers Counties and all counties lying east of these counties): Shortleaf, loblolly, longleaf, and slash pines, black locust, Osage-orange, white and red oak, mulberry, shag-bark or white hickory, white ash, black walnut, and sweetgum.

In the Post Oak-Hardwood Region (Montague, Wise, Parker, Hood, Somervell, Bosque, Coryell, Bell, Williamson, Travis, Hays, Comal, Bexar, Wilson, Karnes, Bee, San Patricio, Nueces, and Kleberg Counties and all counties lying east of these counties,

except those included in the Pine-Hardwood Region): Post oak, honey-locust, cottonwood, black walnut, Osage-orange, Arizona cypress, American elm, Chinese elm, sycamore, tamarix, black locust, and, in some favorable locations, loblolly and slash pines.

In the West Texas Region (all counties west of those counties included in the Post Oak-Hardwood Region): American elm, black locust, black and western walnut, bur oak, Chinese elm, coffee tree, colutea, cottonwood, desert willow, green ash, hackberry, honeylocust, jujube, lilac, mulberry, Osage-orange, persimmon, western yellow and Scotch pines, Russian olive, tamarix, vitex, wild plum, and (in the southern counties of the region) eucalyptus, Australian pine, and Brazilian pine.

Trees purchased from a State nursery will qualify under this practice.

42. CONTROL OF BINDWEED BY CHEMICALS - Cost of chemicals, but not to exceed 10 cents per pound.

(Prior approval of the county committee must be obtained.)

SPECIFICATIONS: The practice may be approved only if (1) the infestation is limited to a single farm; (2) approved bindweed control measures are being carried out on all adjacent infested farms and contiguous land; or (3) the county committee determines that there is no likelihood of reinfestation from adjacent farms or contiguous land.

